

07/04/2005

FR0303091

CLAIMS

1. A set consisting of a contra-angle and a dental instrument designed for use with the latter, in which set the instrument (1) consists of an active part (2) and, at the opposite end to said active part (2), a handle (3), and in which set the contra-angle comprises a head (5) with a bore (7) forming the housing of the handle (3) for said dental instrument (1), which set is characterized in that:
 - 10 a) said handle (3) of the dental instrument is provided with a rotary drive means (4) capable of meshing directly, when mounted in the handpiece head (5), with a rotary drive means situated upstream of the head of the handpiece, said drive means (4) being retractable independently of said drive means of the head of the handpiece, and said drive means (4) having the same direction of rotation as the drive means of the head of the handpiece,
 - 15 b) the drive means (4) located on the handle is a pinion capable of engaging with a drive pinion located inside the body (6) of the contra-angle, in the vicinity of the head and mounted on a shaft transmitting the rotational movement of the mechanical members upstream of the contra-angle into a rotational movement of the instrument (1),
 - 20 c) the profile of the pinion of the drive means located on the handle and that of the drive pinion in the head are such that said pinions mesh when the instrument (1) is placed in the head (5), the point of contact between these two pinions occurring at the bottom of the driving pinion,
 - 25 d) the head (5) is shaped in such a way that the

instrument (1) is fitted by placing the head (5) on the handle (3) of the instrument,

5 e) the contra-angle comprises a means (8) of retractable axial retention of the handle of the instrument capable of being operated by the practitioner.

10 2. The set as claimed in claim 1, characterized in that the instrument also comprises a shoulder (25) close to the rotary drive means (4), on the side nearest the active part (2) of the instrument (1).

15 3. The set as claimed in one of claims 1 - 2, characterized in that the retractable retention means (8) consists of a part (8a) projecting across the opening (7) of the housing, and in that this projecting part (8a) is connected to a ring (9) that can be moved against the action of a restoring spring (10) and that is mounted concentrically on the outer periphery of the body (6) of the head (5).

20 4. The set as claimed in claim 3, characterized in that said projecting part (8a) also comprises on its outer face a retraction slope (12) designed to engage with a combined profile on the handle (3) of the dental instrument (1) so that when the handle is inserted into the head of the handpiece, the combined profile of the handle causes the retention means to retract.

25 5. The set as claimed in claim 4, characterized in that the projecting part (8a) also comprises a horseshoe profile so as completely to fit the shape of a shoulder (25) formed on the dental instrument.

6. The set as claimed in one of claims 1 - 2, characterized in that the retention means (8) is a split spring ring (20) arranged on the head (5) of the handpiece in such a way that the ends (20a and 20b) of the split ring (20) project in the rest position into the mouth of the opening (7) of the housing of the handle (3) of the instrument (1) and in that this ring (20) is retractable under the action of a pushbutton (22) located on top of the head (5).

10 7. The set as claimed in claim 6, characterized in that each of the ends (20a and 20b) of the split ring (20) is provided with a retraction slope (23 and 24), these retraction slopes (23 and 24) being designed to engage with the end of the handle (3) of the instrument 15 (1) so as to push back and allow access to the housing (7) of the head.

20 8. The set as claimed in either of claims 6 and 7, characterized in that each end (20a and 20b) of the split ring (20) also comprises a horseshoe profile so as completely to fit the shape of a shoulder (25) formed on the dental instrument.